

VALUE ADDITION TO SILKWORM RAISING BY EXPLORING OFF-STREAM AVENUES

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ABSTRACT

Sericulture, like any other agro based industry, faces tremendous challenges from escalating labour cost, conversion of sericulture land for real estate and industrial purposes, demographic changes, shortage of trained manpower, and economic volatility of world markets. In order to sustain the growth of any industry, profitability needs to be maintained at a healthy level. This is equally applicable to sericulture as well. Therefore, it is necessary not only to explore means and ways to curtail the production cost but also to add value through diversification of products and byproducts. Apart from the regular products, there are ample avenues to utilize the byproducts of sericulture which if used prudently and judiciously can help increase the value of sericulture products or maintain a healthy level of profitability. Owing to the recent advances in biomedical sciences, silk has increasingly been used as biomaterial to make scaffolds, sponges, films, gels, nano particles and nano fibrils. These high value products can definitely bring additional benefits to the sericulture industry. This review attempts to highlight these advances in the usage of silk and other products from silkworms with the objectives of creating a changed perception on the economic returns from silkworms, to make sericulture more vibrant and sustainable.

Key words: Biomaterial, fibroin, sericin, silk, silkworm.